

REMARKS

Claims 1-49 are pending. Claims 1-9, 13, 29-32, 35, 36, 39 and 49 are rejected. Claims 10-12, 14-28, 33, 34, 37, 38 and 40-48 are objected to. In view of the following remarks, Applicants respectfully request reconsideration of the application.

Allowable Subject Matter

Applicants appreciate the Examiner's indication that claims 10-12, 14-28, 33, 34, 37, 38 and 40-48 include allowable subject matter.

Claim Rejections – 35 U.S.C. § 102

Claims 1-4, 7-9, 29-32, 35, 36 and 49 stand rejected under 35 U.S.C. 102(b) as being anticipated by Pringle et al. (US 5,394,951). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Pringle at least fails to teach or suggest the feature of a connector for transmitting the rotating torque and the axial force that is recited in independent claims 1 and 30.

The Office Action implicitly admits that Pringle does not disclose "the first connector [] connectable to the drill string assembly so as to transmit the axial force only to the drill pipe, and to transmit the rotating torque to a further drive shaft positioned within the drill pipe" that is recited in independent claims 1 and 30 (see, Office Action at page 2). Without citing any relevant text in Pringle's disclosure, the Office Action asserts that Pringle describes "the second connector [] connectable to the drill string assembly so as to transmit both the axial force and the rotating torque to the drill pipe" that is recited in independent claims 1 and 30 (Id.) As illustrative examples, the present application discloses in Figs. 4 and 6 and corresponding descriptions a second connector (402, 602) that transmits both the axial force and the rotating torque to a drill pipe (401, 601) so that the drill pipe (401, 601) both moves axially and rotates radially. In contrast, Pringle's drilling assembly uses two different mechanisms (i.e., one is drilling fluid flow and the other is a piston) to transmit the rotating torque and the axial force respectively. Specifically, at column 3, lines 25-29, Pringle states: "Connected to the stabilizer 28 is a

downhole turbine or motor 30 which uses drilling fluid flowing from the earth's surface through the drilling string or coiled tubing 20 to rotate the drill bit 26", while, at column 4, lines 28-32, Pringle states: "The second portion 46 [of a thruster 40] is forced by action of hydraulic, pneumatic and/or electric power to extend a piston therein to advance the bottom hole assembly's components connected therebelow, and specifically the drill bit 26, into the earth." In particular, the Office Action characterizes component 28 shown in Fig. 1 of Pringle as a drill pipe (see, Office Action at page 2). Applicants respectfully note that component 28 of Pringle's drilling assembly is "a near bit centralizer or stabilizer 28 ... for ensuring the drill bit 26 remains in the center of the bore hole 18 as it is being created" (see, e.g., Pringle at column 3, lines 19-23). As such, Pringle's component 28 would not move axially and rotate radially at the same time, otherwise it cannot serve its intended purpose of centralizing or stabilizing the drill bit 26. Thus, it is improper that the Office Action uses Pringle as a 102 anticipating reference. Accordingly, Applicants respectfully request that the Examiner withdraw the 102 rejection and allow independent claims 1 and 30 and related dependent claims that have also been rejected in view of Pringle.

With further regard to claims 8 and 36, the Office Action cites column 3, lines 36-59 of Pringle against "variable diameter stabilizer" that is recited in claims 8 and 36. However, a careful reading of the cited text indicates that Pringle merely teaches an articulated sub 32 that clearly has a fixed diameter, though the deflection angle of the sub 32 may be adjusted. Thus, Pringle's articulated sub 32 is completely different from the recited variable diameter stabilizer that can extend or retract in diameter so as to control the drilling direction, as described in Figs. 9 and 10A (see components 905, 906 in Fig. 9 and components 1001, 1002 in Fig. 10A) and corresponding descriptions of the present application. As such, claims 8 and 36 are patentable over Pringle for the additional reason discussed above.

Claim Rejections – 35 U.S.C. § 103

Claims 5, 6, 13 and 39 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Pringle. As discussed above, independent claims 1 and 30 are patentable over Pringle. So are claims 5, 6, 13 and 39 since those claims depend variously from claims 1 and 30.

CONCLUSION

Consideration of the foregoing remarks, and reconsideration of the application are respectfully requested by Applicants. It is believed that the Office Action dated August 18, 2010 has been fully addressed, and that the application is now in condition for allowance and Applicants earnestly seek such by the Examiner. If any fee is due as a result of filing this paper, please appropriately charge such fee to Deposit Account No. 50-2183 (Ref. No. 21.1187) and please credit any excess fees to such deposit account.

If the Examiner deems that any issue remains after considering this paper, the Examiner is invited to contact the undersigned attorney to expedite the prosecution of the application and engage in a joint effort to work out a mutually satisfactory solution.

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